

Facilitators of and Barriers to Physical Activity in Retirement Communities: Experiences of Older Women in Urban Areas

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Background. Older people are being encouraged to be physically active for as long as possible as a preventive measure against disease and functional decline. It remains, however, uncertain how living in a retirement community affects physical activity (PA).

Objectives. This study was conducted to understand the PA experiences of older women living in retirement communities and what they experience as facilitators of and barriers to PA.

Design. The study was qualitative and guided by the Vancouver School of doing phenomenology, a unique blend of phenomenology, hermeneutics, and constructivism.

Method. Participants were 10 women, aged from 72 to 97 years (mean=84 years). In-depth interviews were conducted, recorded, transcribed, and thematically analyzed.

Results. A model was constructed with 3 main themes: (1) the women themselves, including their experienced health condition, individual aspects of functioning, and various personal factors; (2) the physical environment; and (3) the social environment. These main themes all include subthemes of experienced influences on PA, such as health, design of housing and environment, and local culture. These influences could both facilitate and hinder PA, depending on the context. The facilitating effects of good outdoor areas, accessible physical training facilities, a familiar neighborhood, and finding joy in PA were clear in the study. The barriers included worsening health, a colder climate with ice and wind, and lack of a PA culture within the retirement community.

Conclusions. An older woman's residence may strongly influence her ability and motivation to be physically active. Physical therapists should acquaint themselves with the facilitators of and barriers to PA of women within retirement communities and use that knowledge to influence the physical and social environment and to target PA interventions to the women themselves.

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The relocation of older people to housing designed for that age group is usually different from other transitions earlier in life, as it is based on reasons such as failing health, the need for assistance, or loneliness.^{1,2} Research has indicated both positive and negative aspects of such relocation.^{3,4} Despite the emphasis on the importance of physical activity (PA) in old age,³⁻⁸ the literature is sparse on how living in housing for older people affects their PA behavior. Yet, research into PA and the physical and social environment, as well as caregiving responsibilities, indicates the need for such studies, especially among older women.

Many studies indicate the importance of the physical environment for PA.⁹⁻¹¹ In particular, density, walkways, accessibility of stores, traffic safety, and no fear of crime or unleashed dogs are factors in the physical environment that positively affect the PA of the residents of retirement communities.^{9,12,13} On the other hand, a systematic review of potential environmental determinants of PA indicated that only 2 factors were associated with vigorous PA: the availability of PA equipment and a network of trails.¹⁴ Studies on the relationship between weather and PA are rare, and few consider a colder climate or a continental climate. A qualitative study of the northern physical environment and the well-being of older people revealed that cold, snow, light variation, and distances influenced the well-being and PA of older people.¹⁵ As walking seems to be the most common form of exercise of older people,^{16,17} colder climate could be a barrier to PA, but research is lacking in this area.

Studies on the influence of the social environment on PA have identified that social support and having a companion for PA have a strong associa-

tion with PA.^{14,18} Research results also have indicated an association between self-efficacy and PA,^{13,19,20} and fear of falling is probably the most important factor in predicting activity avoidance among older adults.²¹ In addition, there are possible links between intrinsic motivation and greater PA, as well as some kind of extrinsic motivation facilitating PA (eg, to be active to stay healthy).^{22,23}

In late adulthood, decreasing family and job responsibility may lead to older people experiencing more free time and having more opportunities to participate in organized PA. A former positive experience of PA also may be a strong facilitator for older people to become active again.²⁴ However, caregiving responsibilities because of a frail spouse can be a barrier to PA, whereas leisure-time PA is possibly dependent upon how active the spouse is, especially for women.²⁵ Sex differences may exist in this area in that family responsibility and caregiving responsibilities could affect women's participation in PA more than men's participation.^{26,27}

A retirement community is a housing option commonly used by older adults. It is usually a multiresidence housing facility, and additional facilities often are provided within the building for meals, gatherings, recreation, and some form of health care. Women comprise the majority of the residents of these communities due to living longer. They may be more dependent than men on the neighborhood of the retirement community because they are less likely to drive a car,²⁸ and research indicates that women living in urban areas are less physically active than men.¹³ Therefore, the purpose of this research was to study in depth the PA experience of older women and to understand their lived experience

of facilitators and barriers to PA in retirement communities.

Method Study Design

The study was qualitative and guided by the Vancouver School of doing phenomenology.²⁹ The Vancouver School is an interpretation of phenomenological philosophy and is a unique blend of phenomenology, hermeneutics, and constructivism. Placed in a philosophical context, the Vancouver School:

... espouses a world that is made up of meanings which profoundly affect how people experience and live their lives... The Vancouver School stands for moderate realist ontology... a transactional epistemology... a hermeneutic dialectical methodology. The inquiry aims are oriented to the production of reconstructed understandings... and a commitment to the study of the world from the point of view of the interacting individual.^{29(p47)}

The number of participants in typical studies that utilize the Vancouver School approach is usually 5 to 15, or at least 10 dialogues (or interviews). The constructivistic approach of the Vancouver School means that the researchers using this methodology usually present their findings as a construction and typically as a model or a table. The Vancouver School emphasizes that researchers, as "specialists," aim to put away preconceived ideas and to stay open to hearing something new when they participate in the interview. This aim can be complicated because all of our attempts to understand and interpret the world are affected, usually to a large extent, by the tradition and society we live in.³⁰

Recruitment of Participants

We recruited participants based on the following inclusion criteria: (1) be a woman, (2) be at least 70 years old, (3) have lived in a retirement community for at least 6 months, and

(4) be able to communicate verbally and share her experience. We used various ways to recruit participants to avoid the sample being elite. We sent posters to all women in a few retirement communities, and some women were approached directly. Moreover, we used a network of colleagues, janitors, and caretakers within retirement communities to distribute information about our study. Of those women who were willing to participate, we recruited participants purposefully, aiming for both physically active and inactive participants who were single, married, or widowed. The participants were 10 women, 72 to 97 years old (mean=84 years). They had lived in retirement communities from 6 months to 20 years (mean=5 years), and all were able to walk independently indoors and outdoors, with or without a walking device. Further information about the participants is presented in Table 1.

Table 1.
Description of Participants (N=10)

Characteristic	Measurement
Age (y), mean (range)	84 (72-97)
Years living in retirement community, mean (range)	5 (0.5-20)
Marital status, n	
Widowed	7
Married and living with husband	2
Married and husband in nursing home	1
Use of a walking device, n	
Walker indoors and outdoors	2
Walker outdoors	1
Cane outdoors	2
Drives a car, n	
No	8
Yes	2
Education, n	
Teacher	1
Vocational training	2
High school	1
Middle school	3
Elementary school	3

The Retirement Communities

The women lived in 7 different retirement apartment buildings, all in the same urban area. The ownership of the apartments differed, as 2 were privately owned, 3 were rented from private companies, and 5 were rented from the municipality. All of the retirement communities shared a floor plan that allowed the women to walk indoors into a service center with a dining hall and recreation facilities. Only the apartments rented from private companies had access to a physical therapy facility indoors, but all participants had the right to receive home care physical therapy.

Data Collection and Analysis

The study was approved by the National Bioethics Committee (VSNb-2009020027/03.7) and reported to the Data Protection Authority (S1293/2009). All participants were given written information about the study and signed an informed con-

sent statement before entering the interview.

The first author conducted all interviews in 2009. They took place at each woman's home or in a service center within the retirement community, depending on her preference. Two of the 10 women were interviewed twice to gain a more in-depth understanding of their experience (a total of 12 interviews). Interview questions were open, based on the main interview question: What is your experience regarding PA in this retirement community, and what are the main facilitators of and barriers to your PA?

The data collection and data analysis were based on the 12 basic steps of the research process of the Vancouver School (Tab. 2). Interviews were recorded and transcribed, and transcriptions were analyzed for main themes and subthemes. These findings from each interview were

constructed into an analytic framework (steps 4-6). The first author repeated this procedure for each woman (steps 1-6) until a holistic understanding of her PA experience seemed to be captured. Each of the 10 analytical frameworks was verified with each woman to make sure the researcher understood her words correctly (step 7). This process was done by showing each woman the framework that the researcher had constructed based upon the interview.

Following the first 3 interviews, all 3 authors started the construction of the main analytical framework (step 8). Thereafter, data collection and data analysis ran concurrently as each interview was analyzed and verified by the participant, and the resulting framework was used to add to the main analytical framework. When all 3 researchers concluded that nothing new had been heard in the 2 last interviews, saturation was

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Table 2.

The 12 Basic Steps of the Research Process of the Vancouver School of Doing Phenomenology²⁹ and How They Were Followed in the Present Study

Steps in the Research Process	What Was Done in the Present Study
Step 1. Selecting dialogue partners (the sample)	Each woman was selected through purposive sampling.
Step 2. Silence (before entering a dialogue)	Preconceived ideas were deliberately put aside.
Step 3. Participating in a dialogue (data collection)	One or 2 interviews were conducted with each woman. The first author conducted all of the interviews.
Step 4. Sharpened awareness of words (data analysis)	After transcriptions were made, they were read over and over again.
Step 5. Beginning consideration of essences (coding)	The researchers tried repeatedly to answer the question: What is the essence of what this woman is saying?
Step 6. Constructing the essential structure of the phenomenon from each case (construction)	The main factors in each woman's story were highlighted, and the most important factors were constructed into an individual analytic framework.
Step 7. Verifying each case construction with the relevant participant (verification)	Each woman verified the analytic framework pertaining to herself.
Step 8. Constructing the essential structure of the phenomenon from first 3 cases into a main analytical framework (meta-synthesis of the first 3 case constructions). Thereafter, analytical frameworks from the subsequent participants were merged one-by-one into the main analytical framework and consequently added to the themes.	All 3 researchers participated in this process and made sure the main analytical framework constructed was based on the actual data. When no new themes were found, saturation was considered to be reached.
Step 9. Comparing the essential structure of the phenomenon with the data (final construction)	All of the transcripts were read over again and compared with the meta-synthesis of all the different case constructions.
Step 10. Identifying the overriding theme that describes the phenomenon (construction of the main theme)	The main theme was "Facilitators of and Barriers to Physical Activity in Retirement Communities: Experiences of Older Women in Urban Areas."
Step 11. Verifying the essential structure with some research participants (verification)	The results and the conclusions were presented to and verified by 2 of the participants.
Step 12. Writing up the findings (multivoice reconstruction)	The participants were quoted directly to increase the trustworthiness of the findings and conclusions.

considered to have been reached. After reading all transcripts over again and comparing them with the individual and main analytical frameworks, we identified the overriding theme "Facilitators of and Barriers to Physical Activity in Retirement Communities: Experiences of Older Women in Urban Areas." Finally, 2 of the participants were consulted to verify the main analytical framework, and they agreed this was a fair interpretation of their experience.

Validity and Reliability

The research process of the Vancouver School has some built-in strategies designed to increase validity and reliability, particularly member checking in steps 7 and 11 (Tab. 2). The researcher triangulation in this study proved fruitful, especially in steps 8, 10, and 12, where the expertise of 3

professionals (2 physical therapists and 1 expert in the methodology) were combined. Triangulation is one of the strategies designed to increase validity and reliability in qualitative research.²⁹ Peer debriefings and thick description also were used as strategies to increase validity. Because of the effects of constructivism within the Vancouver School, reflexivity is a given. The findings are a construction of the researchers, built on the data. A reflective diary was used at all stages of the research process, as required in the Vancouver School.²⁹ Finally, we asked an external auditor, who was unfamiliar with the project, to critique a detailed research report at the conclusion of the study and to review the entire research project. The auditor's contribution, we believe, enhanced the overall validity of the study.

Role of the Funding Source

This study was supported by grants from: The Housing Financing Fund in Iceland, The Research Fund of the Icelandic Physical Therapy Association, The Research Fund of Hrafnista, and The Research Fund of the Geriatric Council in Iceland. The funding sources for this study had no role in the study's design, conduct, or reporting.

Results

The women had lived in retirement communities for up to 20 years. While they were recounting their current PA experiences, they also vividly recalled their initial encounters and the factors that influenced their adjustment to the retirement community. Figure 1 is a schematic representation on how the women described their PA development

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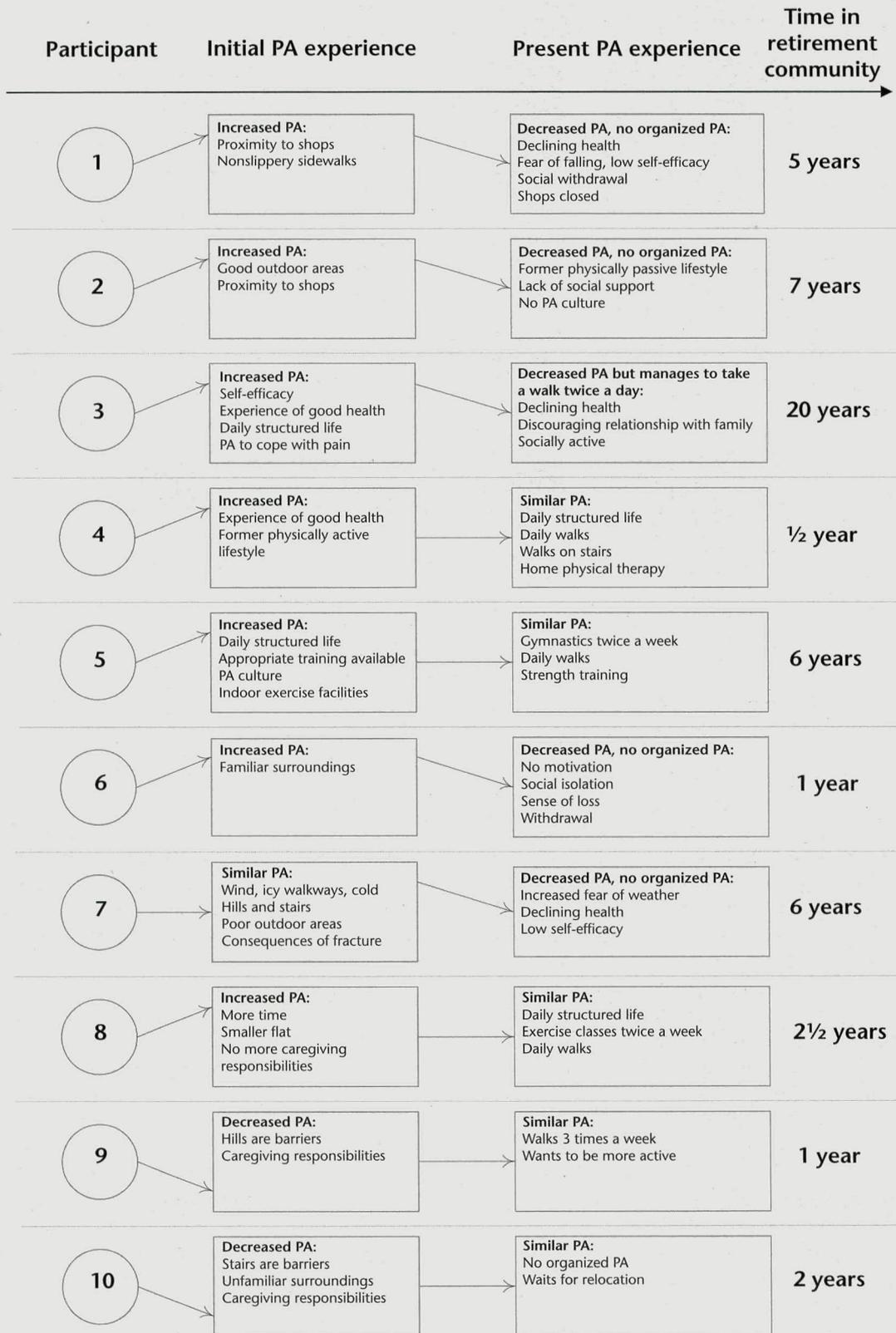


Figure 1.

A schematic representation of the women's physical activity (PA) development after moving to a retirement community, including critical initial and present facilitating and hindering factors.

Facilitators of and Barriers to Physical Activity in Retirement Communities

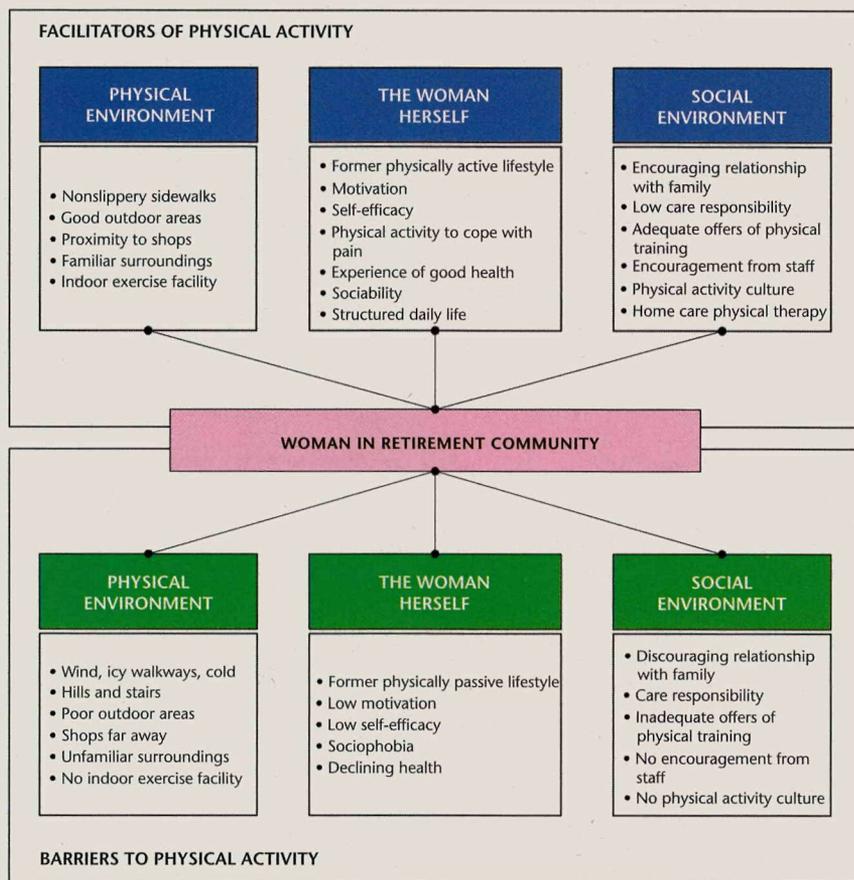


Figure 2. Older women's experience of facilitators of and barriers to physical activity in retirement communities.

after their relocation. All of them described facilitating and hindering factors to PA within their retirement communities. The current PA experiences of the women varied, yet 3 main themes were constructed based on the origins of the facilitating and hindering influences (Fig. 2). These main themes were the physical environment, the woman herself, and the social environment.

Facilitators

Physical environment. Nearly all of the women found it important to take a walk outside. In relation to this, the importance of non-slippery sidewalks was clear. If there is ice, "we walk around here on the [non-slippery] sidewalks. . . . I find it necessary to have [such non-slippery] sidewalks . . . this is something you

don't notice until you have to use it." Outdoor areas also played an important role in the women's lives, for example, having a balcony, shelter from the wind, benches along walking paths, and walking areas with no hills:

We can always sit down when we walk along X street . . . on the stones there, so it is not so difficult.

That area is nearly all flat and even, with no hills or anything, which I have a bit of difficulty walking on.

Each of the women had her own method of getting to the grocery store. Many were assisted by their children because the stores were too far away. Those women who had had stores close by in the past mentioned how physically stimulating it

had been going shopping: "I just found it very nice moving here [retirement community]. There was a store close by, and I just went there and did not need any help. . . . That meant I could go to the store sometimes more than once a day." Finally, the women all enjoyed going out and getting fresh air. Indoor features came in handy when the weather was too poor to go out: "I run down the stairs here at least 4 to 5 times a day." Thus, it was evident that access to exercise facilities within the residence was an important factor in encouraging PA, especially when the weather was too poor to go out: "I think it is very good to have this kind of facility—very good."

The woman herself. The findings indicate that former lifestyle made a difference: “[I have] always been very good about being active. . . . Yes, if I remember correctly, I’ve always walked quite a bit.” Many women thought they were healthy compared with their neighbors. However, the women had different interests in PA and varied as to whether their motivation was enjoyment or the results that activity gave: “I find it fun, but it is also to get fresh air, oxygen. . . . I really enjoy that. I feel so much better afterwards.” Having self-efficacy was a facilitator for the women: “I am also not afraid of just going out and doing. . . . I can be outside for up to an hour. I can do that without a problem.” They used PA to cope with pain, which is something that they had learned in physical therapy: “. . . in my arm mostly, [I] had arthritis. . . . So I went to the physical therapist. It had a good effect on me. . . . I feel that I improve when I receive it [physical therapy], and worsen again when I don’t.” Their experience of their own health also had an impact, and a few women spoke of how lucky they were to be in good health: “I am so lucky to be fairly hardy. . . . I have been so wonderfully healthy.” Those women who were socially active seemed to have an easier time being physically active, and the company of others had an encouraging effect on them: “There is quite a lot of social life here . . . and I try to go as much as I can. . . . It doesn’t help [to isolate yourself]; then you are simply done for.” In some cases, the women had organized walks in the neighborhood: “We have organized ourselves, and we always go when the weather is nice.” Those women who lived organized lives were more diligent in being active, and they had movement scheduled into their daily routines: “I have a bit of a program, which is fairly comfort-

able. . . . I usually go out early in the morning for 15 minutes.”

Social environment. Motivation from family members was important, and most of the women who were physically active had families who encouraged them: “[My daughter does] not worry about me; she encourages me to go out and be independent.” Not having caregiver’s responsibilities also facilitated the women’s PA: “When you are alone, you have more time.” Training offers had to match their capabilities and interests: “Her exercises [the physical educator’s] are very good.” A few women who were active described some sort of a PA culture in their retirement communities: “In the summer, we just go and exercise with a special exercise program on the radio. Though I’ve done it for years at home, it’s very clever to meet up in the dining area.” Some residents met to go for walks together: “There are a few of us who go together sometimes.” Two women in the group had had home care physical therapy, which they liked very much and which they felt encouraged them to be more active: “I often go out here in the hallways to walk, and I go over the exercises that my physical therapist has me do.”

Barriers

Physical environment. The weather condition that had the most effect on the women was ice: “You are naturally afraid of [walking on] ice, afraid of falling. . . . You take more care, don’t walk as energetically.” Wind also was a barrier: “It is really dangerous to go out when it’s windy; you could be swept away. . . . There has been such bitter weather, and so you can’t really be outside because of the cold.” Hills and stairs were great hindrances for the women who lived in such areas: “I am so tired of the hills here just near the building. It takes a lot of effort to walk when

you have a walker.” As most of the women wanted to be able to go out for a walk, the landscaping of the surrounding areas was a major concern. Benches to rest on were much needed: “It saddens me . . . there are too few seats or benches, there are hardly any, except in a very few places.” Darkness was also a barrier to PA, and a fear of going out in the dark due to the rising crime rate was noted: “You are just always hearing about it [news of crime].” Those women who did not have a store nearby complained that they needed help with that aspect of their housekeeping, which was difficult for some: “It’s just difficult, you see. If I get my children [to] shop with me . . . it is even more difficult.” Two women spoke specifically about how good it would have been to be able “to age in place,” not having to relocate to the retirement community. They named some barriers to being active in their present environment and expressed a longing for the old neighborhood they knew and had lived in all their lives: “It was just very nice there [in the old neighborhood]; we went out every day and walked a lot, but here I go out very little.”

The woman herself. The inactive women in the study had, for the most part, never taken part in any physical training: “I have just never done it, have never been in any kind of physical exercise. . . . I was a competent swimmer, but I didn’t go after I’d had my children.” The women’s amount of interest in activity also varied. The inactive women in the group felt they had to be physically active either to avoid negative consequences or to improve their health, but nevertheless they often simply had no motivation overall: “I don’t move around very much . . . [inactivity is] like a spider web that you can’t get out of if you’ve gotten stuck in it.” Low self-efficacy and fear of falling were

limiting for many women and suppressed their PA: "I fell, and I haven't gotten around since then. . . . I have less courage." Two of the women had experienced difficult hospitalization after a fall, which made them horrified even thinking of experiencing that again. "I had a horrible experience in the hospital. They gave me the wrong drugs . . . and instead of talking to me, they made fun of me . . . almost 2 years passed until I could talk about it without crying [sobs]."

Lack of sociability was a potential hindrance to PA, especially after losing a spouse: "It takes time to get going . . . also because I didn't have a driver's license. It was as if I'd been locked in a closet, you are completely cooped up." The women's health also made a big difference, and some felt clearly how failing health impeded their ability to be active: "I can't move very much due to pain in my back. . . . I can only walk a bit." One of the women experienced "a complex because of the stoma," and that stopped her from going swimming. A difficulty with dressing was a hindrance for the 2 women in the worst health, which can be a factor in inactivity: "I find it a bit hard to dress myself. I dress as seldom as possible. Yes, you have to bend and such. You have to dress yourself twice a day."

Social environment. There were various ways in which family could work as hindrances to the women. In some instances, the family was rather distant and was perceived by the woman as indifferent: "They [the family] leave me for the most part alone now. They always have so much to do." Two women lived with their frail husbands, which affected how often they were able to go out for walks:

My husband is now doing poorly and can't go out for walks. . . . When you

are used to doing everything together, you are lazier about getting out on your own. . . . I am, of course, a bit bound because of this, [I] think about not being gone too long . . . of course, something can always happen, he is so unstable you see, could fall. . . . If he had an emergency or something . . . it would be terrible to not be available. . . . It's just guilt [for leaving him at home alone], isn't it? It is quite possible [to go out for walks] if you are decisive enough about it. Maybe I'm too complacent. You just let others decide for you.

A few women mentioned that the physical training offered at the service centers in their retirement community was either too difficult or did not meet their needs: "They [physical educators] come here, but I can't handle it because of my back. . . . I have gone to the pool, but I don't think that it is good for me." None of the women experienced encouragement to be active from the employees of the service centers: "We get no encouragement." Those women who moved little and were socially isolated also experienced little in the way of a PA culture: "It is not common [that people are out walking]. . . . She was saying that she never sees a single person out here walking in the mornings."

Discussion

The findings of this study provide a valuable insight into older women's experiences of PA in retirement communities. The women described a variety of influencing factors, which either facilitated or hindered them in being physically active. The model we constructed from the women's experiences delineates the facilitators of and barriers to PA among the women studied who were living in these retirement communities. These facilitators and barriers are categorized under 3 main themes and reflect the characteristics of the women themselves as

well as their physical and social environment.

The Woman Herself

The woman herself is a theme that includes subthemes associated with the woman's health condition, individual aspects of functioning, and various personal factors. These subthemes focus on lifestyle, social background, and psychological characteristics that can both facilitate and hinder PA. Personal factors such as motivation, self-efficacy, and fear of falling are all factors that former studies have shown be related to PA.²⁰⁻²³ The necessity of having fun doing exercise or staying physically active was very important to the women, which should be recognized by physical therapists when training older people. It seems that fun is of importance regardless of age.³¹ Good self-esteem and self-efficacy also were important facilitators of PA, a finding that supports the findings of other studies. Physical activity has been found to be related not only to better physical health but also to better self-esteem, less fear of falling, and more experienced mastery or self-worth.^{13,19,32} In this study, the impact of falling was a strong factor, and, unfortunately, a stay in the hospital made things worse. It is certainly very important to consider whether a fear of falling, after a prior fall, is exaggerated by uncaring personnel.

Supporting results from other studies,²³ the women in our research expressed concerns about their health. However, the women varied in how they experienced their health. Many women thought they were healthy compared with their neighbors, which corresponds to the results of other studies.³³ Health challenges, such as a stoma, appeared as a major barrier, and support and education on living with a stoma were lacking. The 2 women with the worst health

problems mentioned difficulties in dressing and undressing as a barrier to PA, which also was reported in a study on people with osteoarthritis.³⁴

Some of the women living a structured daily life had put PA in their daily program, thus helping themselves to stay physically active. This finding is similar to results from a qualitative study on long-term exercise adherence in women,³¹ which indicated that using self-regulation strategies and goal setting increases women's PA. Perhaps those who live structured lives are more likely to exercise than those who do not. Physical therapists should bear this factor in mind when encouraging older women to be physically active and even assist them in making a PA schedule if they have not made one by themselves. Moreover, such a schedule could be a part of a specific activity plan, which is strongly recommended for obtaining sufficient PA among older adults.⁷

The women in our study who were currently active had all had an active lifestyle in the past. The literature is not consistent on this point; some studies have indicated that former lifestyle is a facilitator, and others suggest that it does not matter.²⁴ Research results have indicated that PA at the ages of 30 to 50 years is associated with walking as a form of exercise in old age.¹⁷ Therefore, former lifestyle may affect PA in old age and is part of the person's life story.

Physical Environment

The design of housing and environment was important for the women, and all of the women described icy sidewalks as a barrier to PA. Nonslippery walkways should be part of housing design for the older individuals in northern climates. Wind also was a barrier for the women, and sheltered walkways were lacking. Hills were a barrier for some women,

which indicates that if there are hills in the neighborhood, special features such as benches are needed.^{35,36} Benches for resting were facilitators for PA, a finding that is in line with other studies of the walking habits of older people.^{37,38} Darkness was a barrier for 2 of the women, something to remember when organizing exercise for older people. Exercise should be performed during the day and in daylight, unless they can go to exercise classes indoors.^{15,23} The effect of seasons and weather on PA varies in different parts of the world. Weather can be a barrier to participation in PA, and poor or extreme weather in various areas may hinder such behavior.³⁹ That is why providing indoor exercise facilities for PA is necessary when the weather does not allow outdoor activity. All of the women wanted to be able to go shopping, and a local shop has been shown to be important to facilitate walking for older women.¹²

Social Environment

In the study, it appeared that being familiar with the surroundings was a facilitator of PA, as well as living in a familiar neighborhood. We found no study on this matter, yet, according to our findings, place of origin matters to older people. Hence, retirement communities should be a part of every greater neighborhood or subdivision, with good connection with the surroundings. As all participants mentioned walking outdoors as a priority exercise, the physical environment is an important factor. If older people move into an unfamiliar area, they might need support from their family or staff to get to know these new surroundings.

Sociability appeared as a facilitator of PA, and research results indicate that women seem to be more dependent than men on a social network and that it is possible a lack of sociability could be a barrier to women min-

gling with other people in PA.^{14,17,40} Physical therapists who organize physical activities for older women also should note that most of the women complained that exercise classes in the service center were too difficult.

The decision to move to retirement communities has been found to be partly in order to minimize caregiving responsibilities and to gain independence.² This finding is supported by the results of our study. However, an encouraging family was important for the women in our study, and having a meaningful relationship with their children seemed to help them cope with worsening health, as reported in other studies.^{17,41-43} Being a caregiver for a spouse influenced how much the women could take care of their own health, including PA. Two of the women experienced being confined by frail spouses, which is in line with another study indicating that the PA of the partner was the most significant predictor of PA of the participants.²⁵ Such a life situation raises thoughts about how taking care of a frail partner may be a physical burden in itself and, as a consequence, be detrimental to regular exercise and meeting friends. Whether this factor is more prominent for women than men is not evident. In the literature, however, there are some indications that older women rather than men experience more negative interactions involving close relatives or a frail partner, a situation that also appears to create stronger psychological distress in the women.^{43,44} Therefore, women taking care of frail partners may need empowerment and special support from physical therapists. Additionally, among older women, the culture and sex roles do not necessarily expect them to prioritize their own health,³¹ a point that should be noted by physical therapists.

Family history affected the women's current health and well-being. They reported that relationships with their children were very important, and perhaps these family ties become more crucial as people become older and frailer.⁴³ Moreover, a history of residence and knowing the neighborhood were important indicators of a successful transition to a retirement community. This fact should receive more attention in research on aging.

The women did not experience any encouragement from staff to be physically active. The only professionals encouraging the women were the home care physical therapists. As encouragement from important others is considered to be an influencing factor regarding PA,²³ this is something that might be changed by informing the staff how important their encouragement is.

The women experienced a PA culture in different ways, probably in line with how active they were themselves. Older people are facing a new reality when they move into retirement communities or any kind of housing for older people. Their role models for this change are vague; few had parents living in such housing. In that sense, older generations today are creating new norms, and professionals can help to create a positive PA culture for the promotion of health. Changes that happen too fast or are being forced into a new culture without the understanding or time to adapt can threaten the self-efficacy of older people. A cultural lag can easily occur when the attitudes of older people do not keep up with the development of housing for them. This fact is something to bear in mind when a PA culture is introduced into a retirement community. In interpreting the results of our study, it must be kept in mind that the participants were all born in the first half of the 20th century and

were middle-aged or older when sport and exercise among the general public became popular. Despite this change in cultural outlook, many women had adopted the newer lifestyle, an indication of the adaptability of older women. On the other hand, when organizing PA for older women, especially the very old, it must be realized that their norms can be very different from those of younger people. Moreover, with the baby-boomer generation becoming seniors, physical therapists need to be prepared for continuing changes in the norms and culture of older people.

Interactions Between Themes

According to our findings, when family, staff, housing design, surroundings, exercise offers, and other services in the retirement community are coordinated and based on the needs of the older women, the result should be for the good of the women. The coordination between the family and staff is obvious, but researchers in this area have pointed out the necessity of good communication between staff and family to ensure a better quality of life for the residents.⁴⁵ If a woman has no family or children, the importance of staff is even greater. The idea of transition to a retirement community is quite often originated by the children.¹ People need to study the neighborhood and be diligent when choosing retirement communities for themselves or their parents. Designers need to be aware of the influence of services in the neighborhood, such as shops, and managers need to offer exercise classes that fit the residents' needs.

Limitations

While choosing participants in the study, a sampling bias might have occurred because it was impossible to make sure that the sample was perfectly representative of the population. The most likely possibility

was an elite bias, which occurs when women who are more active and talkative are more prominent in the sample. Another bias might be that, as researchers, our interpretation of the findings was shaped by our own background, such as our sex (we are all women), culture, history, and socioeconomic origin. Although we are equally Icelandic, we are not of the same generation as our participants. As in all qualitative studies, our preconceived ideas could have influenced the results. The interviews were conducted in one geographic area, which might be a limitation because weather, experience, and culture could have been so similar as to prevent the expression of the diversity of people. The women had lived in a retirement community for up to 20 years, which certainly can make it difficult to remember and express changes. Finally, as all of our participants were women, future research is needed on the PA experiences of older men living in retirement communities.

Conclusions

An older woman's residence is an environmental factor that may strongly influence her ability and motivation to be physically active and thereby act as a preventive measure against disease and functional decline. This study gives information on facilitators of and barriers to PA among older women living in retirement communities. Physical therapists should know the main facilitators of physical and barriers to PA and use that knowledge when planning PA interventions to influence the women's physical and social environment and to target the intervention to the women themselves.

All authors provided concept/idea/research design, writing, and data analysis. Ms Bjornsdottir provided data collection, fund procurement, participants, facilities/equipment, institutional liaisons, and clerical support. Dr

Arnadottir and Dr Halldorsdottir provided consultation (including review of manuscript before submission).

Ms Bjornsdottir was a student at the University of Akureyri, Akureyri, Iceland, at the time this research was completed in partial fulfillment of the requirements for her Master of Science degree in health sciences.

Ms Bjornsdottir presented a poster on this research at the 16th International Congress of the World Confederation for Physical Therapy; June 20–23, 2011; Amsterdam, the Netherlands.

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